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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/648,147	08/25/2003	Jimmy L. Droit	AZIC.0100	3527

7590 05/02/2005

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EXAMINER

SINES, BRIAN J

ART UNIT	PAPER NUMBER
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1743

DATE MAILED: 05/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/648,147

Applicant(s)

DROIT ET AL.

Examiner

Brian J. Sines

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) 23-28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

Applicant's election of group I comprising claims 1 – 22 in the reply filed on 2/24/2005 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)). Claims 23 – 28 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

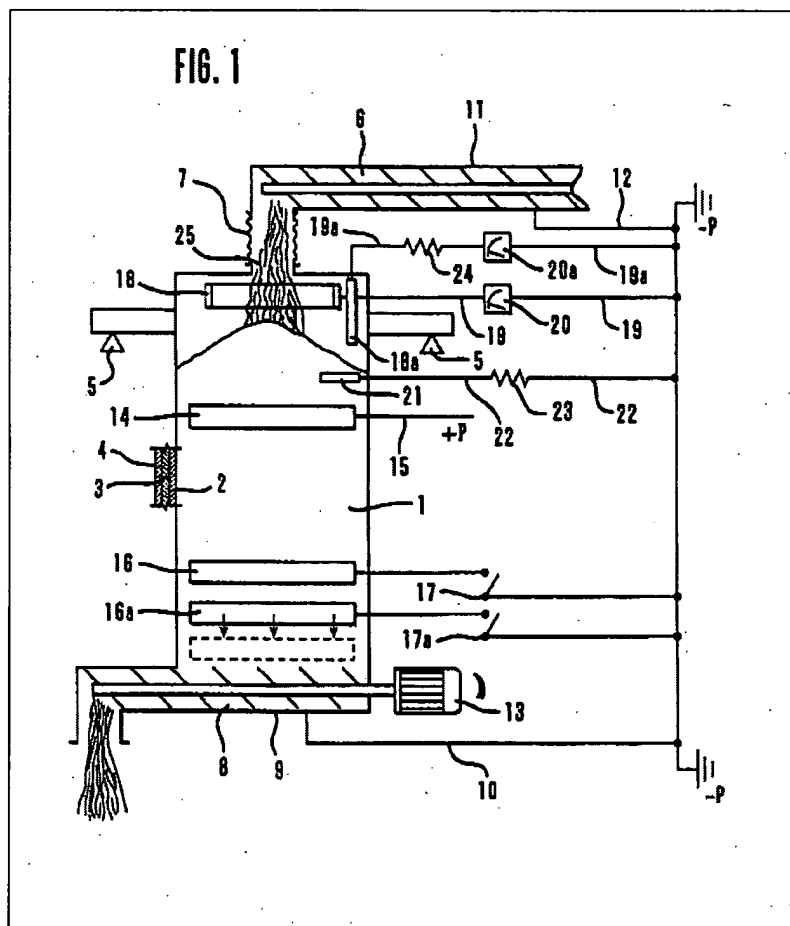
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 & 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Durr et al. (U.S. Pat. No. 5,694,413 A) (hereinafter "Durr").

Regarding claim 1, Durr anticipates an apparatus comprising: an oven (1); a housing comprising of at least one ceramic portion (e.g., heat resistant ceramic material comprising the interior lining of the oven & ceramic plates 2); a heating element (e.g., heating via electrical current using electrodes 16 & 16a); a control system (e.g., switching equipment 17 & 17a); a mass measuring system (e.g., pressure gauges 5) including a sample support (e.g., a steel housing) (see col. 5, line 49 – col. 6, line 62; figure 1). The Courts have held that apparatus claims must be structurally distinguishable from the prior art in terms of structure, not function.

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See *In re Danley*, 120 USPQ 528, 531 (CCPA 1959); and *Hewlett-Packard Co. V. Bausch and Lomb, Inc.*, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990). The Courts have held that the manner of operating an apparatus does not differentiate an apparatus claim from the prior art, if the prior art apparatus teaches all of the structural limitations of the claim. See *Ex Parte Masham*, 2 USPQ2d 1647 (BPAI 1987) (see MPEP § 2114).



Regarding claim 2, Durr anticipates temperature monitoring and control during process temperature deviations (see col. 58 – col. 8, line 19).

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Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
1. Claims 3 & 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Durr.

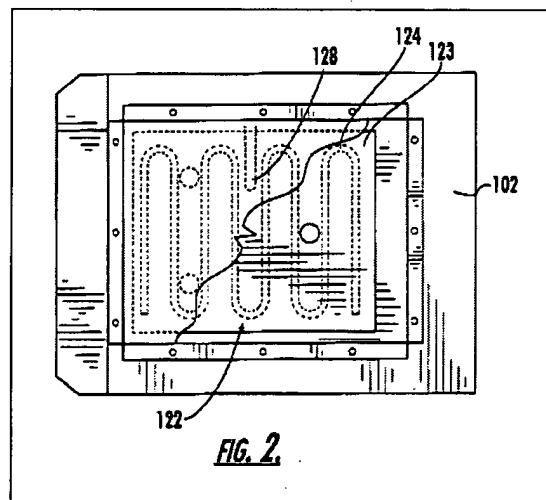
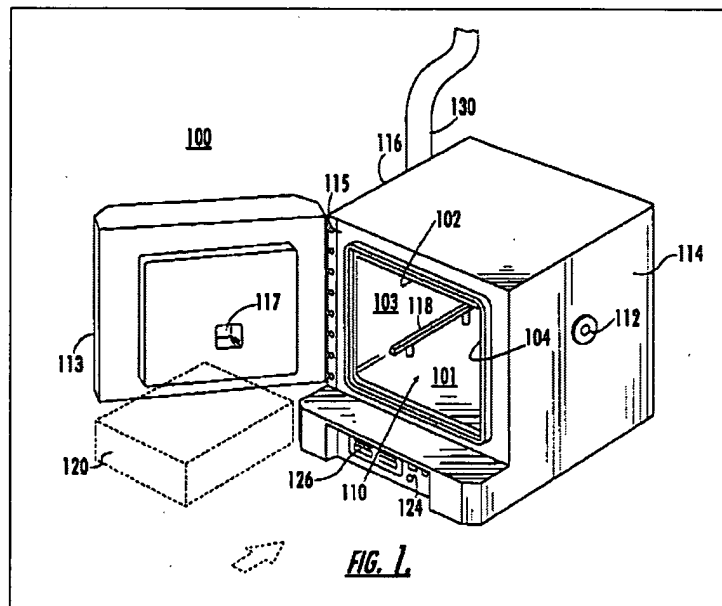
Regarding claims 3 & 4, the use of process control systems and methodologies, such as feedback processes comprising PID algorithms, in the chemical process industries are well known in the art (see MPEP § 2144.03). The Courts have held that to provide a mechanical or automatic means to replace manual activity, which accomplishes the same result, is within the ambit of a person of ordinary skill in the art. See *In re Venner*, 120 USPQ 192 (CCPA 1958). Therefore, it would have been obvious to a person of ordinary skill in the art to incorporate the use of control system as recited in claims 3 & 4 with the disclosed apparatus taught by Durr in order to provide effective control.

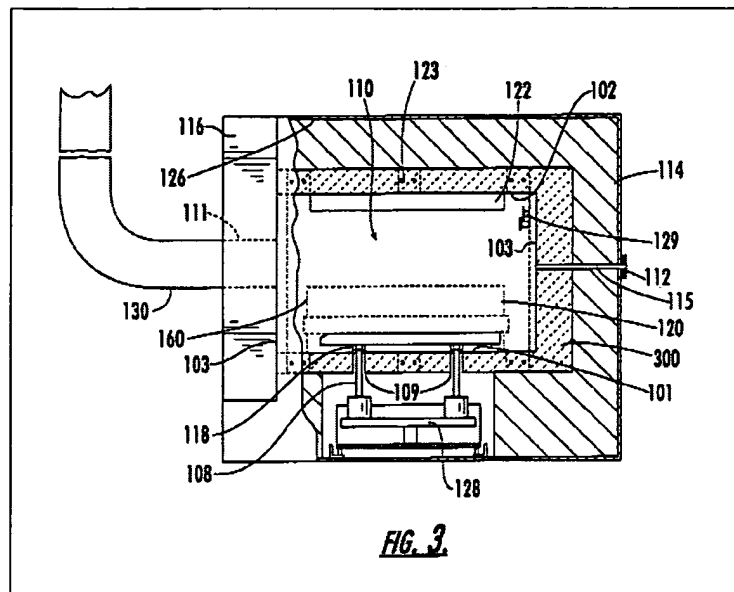
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2. Claims 1, 2, 5, 6, 8 – 13, 17, 18, 21 & 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Troxler et al. (U.S. Pat. No. 6,054,323 A) (hereinafter “Troxler”). Troxler teaches an apparatus comprising: an oven (100); a housing defining a combustion chamber; a heating element (122); a control system (e.g., temperature controller 124); and a mass measuring system (load cell 128) comprising a test material support (sample pan 120) (see col. 3, line 39 – col. 4, line 54; figures 1 – 3). Troxler does not specifically teach the use of a ceramic material for the housing or oven walls (e.g., 101, 102, 103 & 104). Troxler does teach the use of a wall lining (300) comprising a refractory insulation material. Troxler does teach that refractory materials, such as ceramics, are incorporated within the disclosed apparatus (see col. 5, lines 31 – 42). The Courts have held that the selection of a known material, which is based upon its suitability for the intended use, is within the ambit of one of ordinary skill in the art. See *In re Leshin*, 125 USPQ 416 (CCPA 1960) (see MPEP § 2144.07). Therefore, it would have been obvious to a person of ordinary skill in the art to incorporate the use of ceramic materials within the housing of the device to facilitate effective thermal insulation. Troxler teaches that sample weight may be continuously monitored during operation (see col. 4, lines 4 – 19). Troxler teaches that an additional temperature sensor (129) may be optionally provided within the combustion chamber for monitoring the chamber temperature (see col. 4, lines 47 – 54). Troxler teaches all of the positively recited structural limitations of the claimed apparatus. In addition, four prong sample holders are well known in the art (see MPEP 2144.03). The Courts have held that apparatus claims must be structurally distinguishable from the prior art in terms of structure, not function. See *In re Danley*, 120 USPQ 528, 531 (CCPA 1959); and *Hewlett-Packard Co. V. Bausch and Lomb, Inc.*, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990). The Courts have held that the

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manner of operating an apparatus does not differentiate an apparatus claim from the prior art, if the prior art apparatus teaches all of the structural limitations of the claim. See *Ex Parte Masham*, 2 USPQ2d 1647 (BPAI 1987) (see MPEP § 2114).





3. Claims 1 – 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peake (U.S. Pat. No. 5,558,029 A). Peake teaches an apparatus comprising: an oven (ashing furnace 10); a housing defining an enclosure (12); a heating element (heater plate 58); a control system (controller 19); and a mass measuring system (weigh scale 44) comprising a test material support (hearth plate 40) (see col. 3, line 31 – col. 5, line 35; figures 1 – 4). Peake does not specifically teach the use of a ceramic material for the housing. Ceramic materials are well known in the art to be thermally insulating (see MPEP § 2144.03). The Courts have held that the selection of a known material, which is based upon its suitability for the intended use, is within the ambit of one of ordinary skill in the art. See *In re Leshin*, 125 USPQ 416 (CCPA 1960) (see MPEP § 2144.07). Therefore, it would have been obvious to a person of ordinary skill in the art to incorporate the use of ceramic materials within the housing of the apparatus to facilitate effective thermal insulation. Furthermore, Peake teaches the use of a computer controller (19), which utilizes proportional integral derivative (PID) control software, and including closed-loop thermostatic control techniques well known in the art (see col. 4, lines 1 – 16). Peake teaches

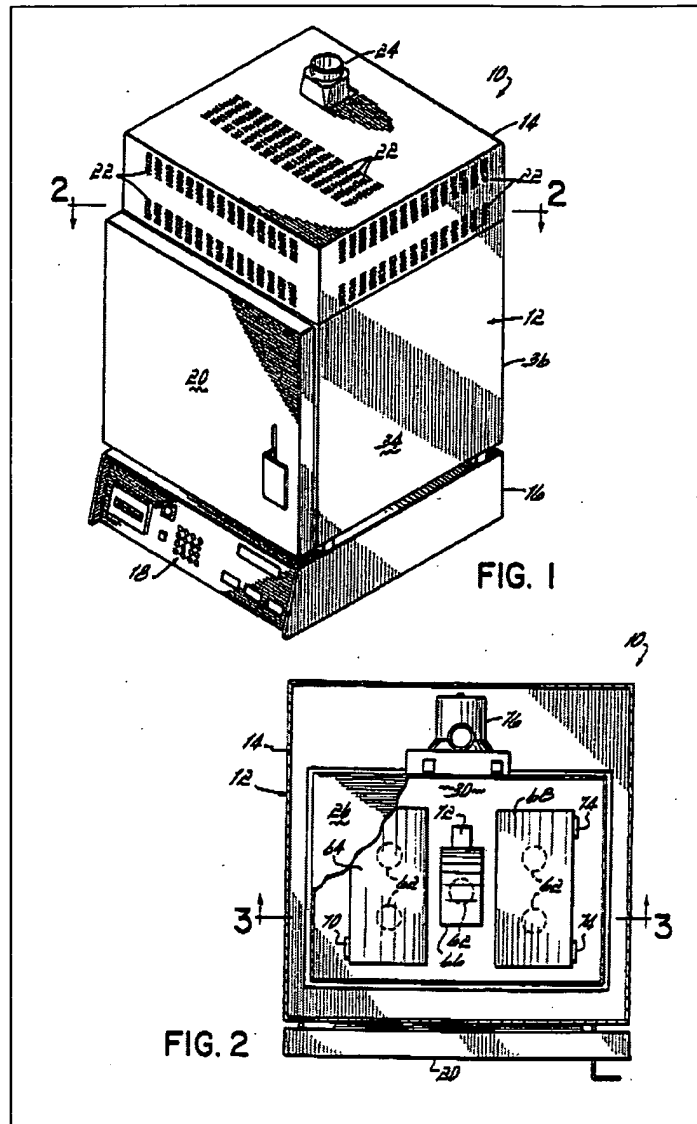
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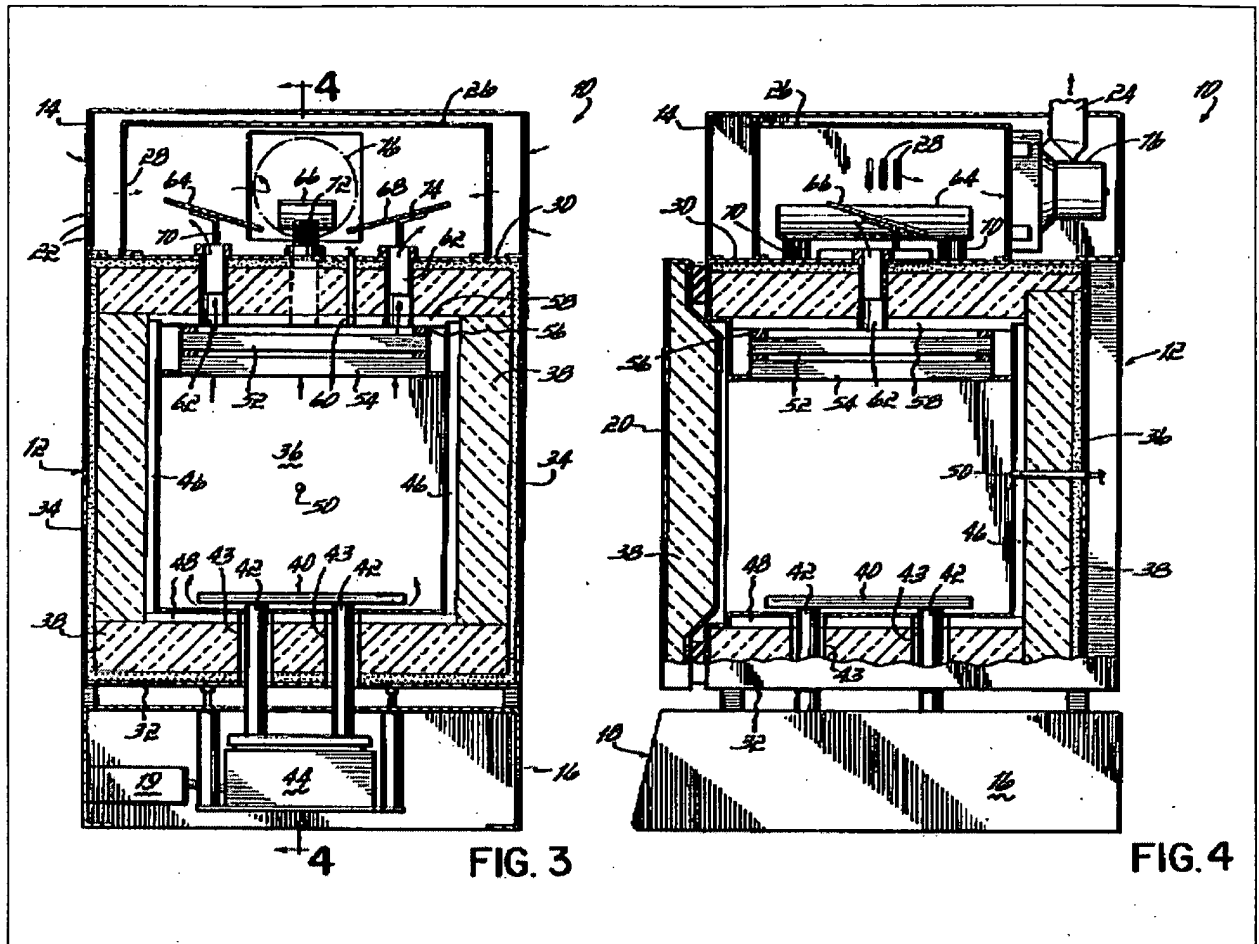
that the weight of the specimen is continuously monitored (see col. 5, lines 31 – 35). The instant claims recite various intended use limitations regarding how the apparatus functions or operates.

However, Peake teaches all of the positively recited structural limitations of the claimed apparatus. In addition, four prong sample holders are well known in the art. The Peake apparatus is capable of performing in the claimed manner for the intended use. The Courts have held that apparatus claims must be structurally distinguishable from the prior art in terms of structure, not function. See *In re Danley*, 120 USPQ 528, 531 (CCPA 1959); and *Hewlett-Packard Co. V.*

Bausch and Lomb, Inc., 15 USPQ2d 1525, 1528 (Fed. Cir. 1990). The Courts have held that the manner of operating an apparatus does not differentiate an apparatus claim from the prior art, if the prior art apparatus teaches all of the structural limitations of the claim. See *Ex Parte*

Masham, 2 USPQ2d 1647 (BPAI 1987). The Courts have held that it is well settled that the recitation of a new intended use, for an old product, does not make a claim to that old product patentable. See *In re Schreiber*, 128 F.3d 1473, 1477, 44 USPQ2d 1429, 1431 (Fed. Cir. 1997) (see MPEP § 2114).





Conclusion

The prior art made of record on form PTO-892 and not relied upon is considered pertinent to applicant's disclosure. The applicant is required under 37 C.F.R. § 1.111(c) to consider these references fully when responding to this office action (see MPEP § 714.02).

1. Barclay et al. teach a microwave apparatus and method for analyzing asphalt materials.
2. Troxler et al. additionally teach a method and apparatus for analyzing asphalt materials.
3. Troxler additionally teaches an apparatus and method for determining weight loss of a heated material.
4. Collins et al. teach a microwave ashing apparatus.

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5. Pommer et al. teach a digital moisture meter and a method for determining percent weight loss for a sample.
6. Watson et al. teach an apparatus for measuring changes in weight of a sample as a function of temperature.
7. Crowe et al. teach a method and apparatus for performing thermogravimetric analyses.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian J. Sines, Ph.D. whose telephone number is (571) 272-1263. The examiner can normally be reached on Monday - Friday (11 AM - 8 PM EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill A. Warden can be reached on (571) 272-1267. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Brian J. Sines". The signature is stylized with a large, flowing "B" and "S".